per cent. of bromine. The dose is double that of potassium bromide. Because of its ready solubility it can be administered in water or in the preparations of peppermint, valerian, etc. Thus far it appears to be a safe and efficient substitute for the metallic bromides.—*Les Nouveaux Remèdes*, 1895, No. 2, p. 32.

THE TREATMENT OF MERCURIAL TREMOR BY HYOSCYAMINE.

DR. H. BRUGER (*Thèse de Paris*) has reported the results of his observations of the use of this remedy. The method recommended by Oulmont consisted in prescribing each day two pills of the drug each containing one-sixty-fourth of a grain, and in doubling this quantity every two days until the maximum of ten to twelve times the original dose was taken. These large doses produced pharyngeal irritation, mydriasis, mild delirium, and diarrhœa; serious inconveniences which prevented its universal adoption. Cuffer, on the other hand, never exceeded one-sixteenth in the milder and one-sixth of a grain in the severer forms, and exhibited the drug between meals. This time of administration was selected to avoid digestive and salivary disturbances. It was found to be advantageous to prescribe a milk-diet and to employ sulphur baths to aid in the elimination of the mercury. There were no toxic symptoms, and diminution of the tremor followed in twenty-five to thirty days, after which the use of the limbs was recovered, and complete cure resulted in six to eight weeks. This drug is active and dangerous, but moderately cumulative, but in small doses extended over a considerable period of time one avoids these inconveniences.—*Journal des Praticiens*, 1895, No. 5, p. 74.

THE USE OF ALCOHOL IN DIABETES.

DR. FELIX HIRSCHFELD concludes that in the amount of one or two ounces alcohol is completely oxidized in the organism of the diabetic. The amount of urine is not increased nor the absorption of aliment influenced. The albuminous metabolism, on the contrary, is markedly increased, and as a result the general nutrition is improved. Upon the tissue-changes peculiar to diabetes, the glycosuria, the acetonuria, and the lessened absorption, alcohol is without influence. The unfavorable action of alcohol in its possible injurious action upon the heart and bloodvessels is to be considered. Especially in an accompanying albuminuria is the danger of renal irritation present. The use of alcohol in severe cases of diabetes is necessary that we may avoid and limit the supervening failure of strength and development of tuberculosis from insufficient nutrition. In mild cases of glycosuria, only the property of alcohol as a *genussmittel* is to be considered, and then occasionally in moderate amount.—*Berliner klinische Wochenschrift*, 1895, No. 5, p. 95.

THE COMPARATIVE ACTIVITY OF DIGITALIN AND DIGITOXIN.

DR. E. BARDET, from a study of the French crystallized digitalin and the German digitoxin, has arrived at the following conclusions: 1. Crystallized digitalin, so-called chloroformic, is the only one of the products derived from digitalis which represents a really definite principle and one of constant action and well recognized from a therapeutic standpoint. 2. Digitoxin is not, as has been alleged, a principle identical with the crystallized or even the amorphous digitalin, but is a non-crystalline amorphous mixture of indefinite composition. Its activity is variable, and may be equal or even two or three times stronger than the crystallized digitalin. 3. The amorphous digitalin, so-called chloroformic, contains, as well as the digitoxin, a body, probably a glucoside, of considerable but of varying activity. 4. There is a great practical advantage in maintaining in the pharmacopœias only those definite bodies of constant activity: consequently the crystallized digitalin, so-called chloroformic, being the only definite active principle of digitalis, ought to be the only one prescribed. 5. The Therapeutic Society ought to see to it that the French Codex should suppress the amorphous digitalin and admit only the chloroformic crystallized digitalin.—*Les Nouveaux Remèdes*, 1895, No. 2, p. 27.

URÆMIC AND DROPSICAL COMA.

DR. BENJAMIN WARD RICHARDSON states that in the acute cases there can be no doubt as to the value of bloodletting from a vein; even a feeble pulse ought not to prohibit it. Judiciously applied it is free from danger; it does not lead to collapse or shock; relief from the symptoms is, as a rule, immediate. When there is dropsical exudation with deep coma, bleeding is still a sound and correct remedial measure, although never very hopeful. It seems to give relief, but nothing more. When there is extensive exudation, with a comatose tendency, owing to fluid-pressure, bleeding need not be contended for. Artificial removal of the fluid by tapping is here of the greatest service. Diuretics have been found to be capricious and doubtful as positive means. Diuretin in one case increased the flow of urine to one hundred and seventeen ounces in twenty-four hours, but it had to be stopped owing to its production of a rapid and feeble pulse with marked prostration. The fluid can be removed by aspiration from the thorax, by the trocar from the abdomen, by Southey's tubes from the lower limbs, the comatose tendency being always relieved by reduction of pressure. In deciding upon treatment, temperature plays an important part. If it be above normal, *cæteris paribus*, there is no need for a moment's hesitation about the performance of venesection; if it be normal, although some dropsy be present, there need be but little hesitation about bleeding; but if the temperature be below normal, with dropsy, then venesection could not be expected to render the least service, it might, indeed, be a dangerous process by inducing a superfluous flow of water into a blood already attenuated. The point of practice in such a case is to draw off the effused fluid upon the pressure from which the coma is dependent. —*The Asclepiad*, 1894, No. 42, p. 113.

THE TREATMENT OF DIPHTHERIA.

MR. LENNOX BROWNE, while not rash enough to dogmatize, where others have hardly dared to theorize, suggests that antitoxin acts by promoting a local capillary thrombosis at the site of the exudation, which at once leads to a shedding of the deposit, to destruction of the bacilli, and to a blocking of the channels against toxic absorption, the general system being at the same time improved by an increased metabolism of the toxic products, thereby leading to an improvement in the quality of the blood. This explanation would also account for the failure of antitoxin when adopted too late to prevent absorption in a system too weakened to withstand further calls on its vital processes. The advantages of this treatment are that it acts with more rapidity than any other in arresting the development of membrane, assisting in its detachment, and hastening the disappearance of the bacilli, with a corresponding relief and improvement in the general condition, as notably instanced by the prompt disappearance of the adenitis, one of the most strongly marked objective evidences of toxæmia. The accumulated evidence of Hanseman, Baginsky, Ringer, Washbourn and Goodall, Benda and Monti, agrees with the writer's experience, which inevitably leads to the conclusion that there is an increased tendency to nephritis, cardiac failure, and septicæmia in cases treated with this remedy over what was formerly observed under the old treatment. Recognizing the importance of the older methods of treatment, these should by no means be omitted at the present time. The warnings that under the use of antitoxin there is an increased susceptibility to heart-failure, nephritis, and general septicæmia must be interpreted as indicating that at the earliest indications of cardiac weakness analeptic and stimulating treatment must be commenced and persevered in. Renal activity must be assisted. Every precaution must be taken against sepsis from whatever source that might increase the liability to erythemal and joint pains, evidently of a toxic character and out of proportion in frequency of occurrence to what has been hitherto observed. It must not be forgotten that in diphtheria, as in all other specific fevers, an epidemic may occur of such a malign type, or perhaps in individual cases the disease may be exhibited, from the first onset, in so grave an aspect that no remedy whatever can occasionally avert a fatal issue. To suppose that antitoxin, either with or without other measures, excellent though they may be and however promptly applied, will place the percentage of mortality under such circumstances in a more favorable position than that of enteric or scarlet fever is nothing short of Utopian.—*Medical Press and Circular*, 1895, No. 2910, p. 157.

DR. TH. HOYNTSCHAK reports an instance in which he used Behring's antitoxin and noticed profuse perspiration, urticaria, pains in hands and feet, swelling of these joints, eruption resembling peliosis rheumatica. Recalling the similar cases of Asch and of Lublinski, he inquires what is the exciter of so evident an infection and how it is that it comes into the remedy? The symptoms point very plainly to an infection.—*Wiener klinische Wochenschrift*, 1895, No. 4, p. 61.

DR. O. SOLTMAN reports 193 cases. In four months, without antitoxin, 28 of 71 children died, *i. e.*, 39.8 per cent.; in five months, when the majority of cases were treated by antitoxin, 22 of 122 died, *i. e.*, 18 per cent. He notes the occurrence of albuminuria in 26 cases, and in direct connection with the injections 19 times. Exanthemata were frequently observed; for instance, urticaria generally in the locality of the injection, also, six to eight days thereafter, a scarlatiniform eruption resembling a drug-eruption, but to be distinguished from that of scarlet fever. This was generally limited to the back, nates, and lower portion of the abdomen, was not accompanied by rise of temperature, nor followed by desquamation; the scarlet-fever tongue was absent. True scarlet fever accompanied the diphtheria nine, and measles three times. Post-diphtheritic paralysis, slight palatal paralysis being excepted, was noted five times, four of these being in children who had received this remedy. In three cases after complete disappearance of all local symptoms relapses followed. One child who had been rendered immune became ill three weeks after injection with a genuine but mild diphtheria. Since Behring's antitoxin contains one-half of one per cent. of carbolic acid, in an injection of one hundred and fifty to three hundred minims we have from five-sixths to more than a grain of carbolic acid, which is a maximum dose for an adult. Recognizing the effects of this amount of carbolic acid on pulse, temperature, and kidneys, the author is strongly of the opinion that this antiseptic must be omitted from the remedy.—*Deutsche medicinische Wochenschrift*, 1895, No. 4, p. 53.

DR. A. L. MASON states that the indications for treatment are clear, and point to such measures as will save and maintain the strength of the patient, with the discriminating use of those local applications which tend to check or neutralize toxic absorption and to prevent invasion of the respiratory tract. Tincture of ferric chloride, oxygen, and alcohol in large doses, have met with professional approval to correct toxæmia and to sustain the flagging heart. They are absolutely ineffectual in cases of the more septic type. The same is true of strychnine, strophanthus, and digitalis. Care must be taken in the administration of food and medicines, both on account of the distress which the patient experiences in his efforts at deglutition and the danger of strangling or of broncho-pneumonia from the entrance of food into the air-passages. Systematic feeding by a soft-rubber catheter passed through the nostril into the gullet sometimes saves life. For local treatment mild carbolized sprays, such as Dobell's lime-water, warm alkaline solutions, chlorine-water, or hydrogen peroxide, the latter in ten or fifteen-volume solution or stronger, once or twice daily for a few days, for the removal of the membrane.

DR. E. M. BUCKINGHAM among other means of treatment places great reliance upon the combination of fresh air and sunlight. For local treatment spraying seems to be the only practicable way of making these applications to children, but it should be done with the greatest gentleness. Hydrogen peroxide is of value, but it has been over-estimated. The fifty-volume spray, while seldom a caustic, is too strong for routine use if the object is merely to clean the mouth and not to exterminate the bacilli. Any appreciable strength is too strong for the nose. It has here the additional disadvantage that it probably penetrates the nose far less than most applications, because it sufficiently fills the nostrils with foam to prevent the passage of a gentle spray. There is no objection to the use of a fifteen-volume solution in the mouth. For the nose insufflations of iodoform are used, first clearing the way, if necessary, with forceps or a spray of sterilized water.—*Boston Medical and Surgical Journal*, 1895, vol. cxxxii. p. 145.

DR. F. H. WILLIAMS states that the strength of the hydrogen peroxide solution which is to be used depends entirely upon the conditions which present themselves; the twenty-five-volume solution may be serviceable, or the fifty-volume solution may be required. Never use force under any circumstance. Once in three hours is sufficiently often for local applications, later once in four hours, or less often. The friction of the solutions chiefly causes the discomfort. It is important that efficient instruments should be used. The solutions should be of known strength and have a sufficient amount of hydrochloric acid, which, so far as the germicidal action goes, is the active agent rather than the hydrogen peroxide itself. The hydrochloric acid should be in small percentages, one-fifth of one per cent.—about as much as there is in the gastric juice. The pressure of the air for spraying should be about six, or at most eight, pounds to the inch. Cultures should be made from the throat after a few days, and if the bacilli of diphtheria are absent, local treatment, as a rule, may be stopped.—*Ibidem*, p. 160.

THE PREVENTION OF CONSUMPTIVE DISEASE.

DR. BENJAMIN WARD RICHARDSON promulgates the following as a sanitary decalogue: 1. Pure air for breathing is the first rule for the prevention of consumption. 2. Active exercise, outdoor as much as possible, is essential. 3. Uniform climate is important. 4. The dress should sustain uniform warmth. 5. The hours of rest should be carefully regulated by the sunlight. 6. Outdoor occupation is preventive. 7. The amusements should favor muscular development and sustain healthy respiration. 8. Cleanliness in the broadest sense is of especial moment. 9. Every precaution should be taken to avoid colds. 10. The diet should be ample with full proportion of the respiratory foods.—*The Asclepiad*, 1894, No. 42, p. 147.

THE POSTURE OF THE HEAD IN ACCIDENT WHEN THE PATIENT IS UNDER AN ANÆSTHETIC.

DR. H. A. HARE has carefully reviewed the work of Howard, and from his studies concludes that the epiglottis is not the cause of the obstruction in arrested respiration in anæsthesia. If, however, the head is extended and simultaneously projected forward, both the tongue and the epiglottis are raised, and the soft palate is so drawn as to permit of free breathing through the mouth as well as the nose. As to the question of the various methods of performing artificial respiration, that of Sylvester is believed to be by far the best. It is, however, vitally important to have an assistant grasp the feet and hold them motionless, since in this way the extension and upward traction of the arms above the head elevate and dilate the chest. This particularly is the case in children and persons of small weight, as the lower segment of the body readily follows the chest in its upward movement.—*Bulletin of the Johns Hopkins Hospital*, 1895, No. 46, p. 1.

OIL OF TURPENTINE AS A HÆMOSTATIC.

DR. J. SASSE recommends this remedy applied upon cotton to check the bleeding after extraction of teeth. In a case of scorbutus it was used in a two per cent. solution as a mouth-wash, and later undiluted, the gums being painted with it every hour, and a small quantity was given internally. In one instance a vesical hemorrhage, which had resisted salol, boric acid, and uva ursi, was successfully treated by dessertspoonful doses of one-half of one per cent. emulsion of the drug.—*Therapeutische Monatshefte*, 1895, Heft 2, S. 83.

MEDICINE.

UNDER THE CHARGE OF

WILLIAM OSLER, M.D.,
PROFESSOR OF MEDICINE IN THE JOHNS HOPKINS UNIVERSITY, BALTIMORE, MARYLAND;

AND

GEORGE DOCK, M.D.,
PROFESSOR OF MEDICINE IN THE UNIVERSITY OF MICHIGAN.

THE BLOOD IN CHRONIC CYANOSIS.

In studying the blood of eight cases of chronic cyanosis from congenital heart-disease, VACQUEZ (*Comptes Rendus de la Société de Biologie,* March 8, 1895) found marked changes. In all cases the number of red corpuscles per cubic millimetre was increased, the increase being in direct ratio to the intensity of the cyanosis.

Besides the increase in the number of the red corpuscles, an increase in size was also noted, though not until the cyanosis had become quite marked; in fact, in the earlier years of cyanosis the increase in number was only relative.

In individuals of from twelve to twenty years of age blood-counts of from 5,600,000 to 6,300,000 were found, the diameter of the corpuscles varying from 7.9 μ to 12 μ.

Vacquez does not think that the increase in number of the corpuscles was parallel to the increase in diameter, but thinks that both are due to the same cause.

At the same time with the increase in size and number of the corpuscles there is an increase in the amount of hæmoglobin in each individual corpuscle, so that the hæmoglobin does not show its normal relation to the number of corpuscles.

The question as to whether the increase in size of the corpuscle or the increase in hæmoglobin is the primary process cannot well be answered. The process has been explained on the grounds that in cyanosis the supply of oxygen carried to the tissues is insufficient, and that the corpuscular new-formation is compensatory.

GIBSON (*Lancet,* January 5, 1895) reports a case of a boy, aged eight years, whose red blood-corpuscles were 8,470,000 per c.cm., and the hæmoglobin 110 per cent. He refers to other instances in which this increase in the blood-corpuscles has been noted, and suggests the following interesting explanasion: "In venous stasis the corpuscles are insufficiently oxygenated; they cannot perform such an active part as oxygen-carriers, and they cannot yield too much oxygen to the tissues. It must further be remembered that in cyanosis there is less metabolism in the tissues, and therefore less waste produced. In a word, the functions of the corpuscles being lessened, the tear and wear which they undergo are reduced and the duration of their individual existence increased. The number of the corpuscles must in this way be pro-